

REMARKS

Claims 37 and 39 are amended. Claim 43 is cancelled. Claims 37-42 and 44-59 are pending in the application.

Claims 37-59 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner indicates that the claims contain subject matter which was not described in the specification due to the added recitation of "non-iron based alloy". The Examiner further indicates that "the specification does not specify (explicitly or implicitly) that the target is a 'non-iron based alloy'". Applicant disagrees.

Referring initially to the background section of applicant's specification and page 8, lines 29-33, the disclosure indicates that the invention allows high strength monolithic targets from materials such as pure aluminum, copper, gold, platinum, nickel, titanium and their alloys. Clearly, these materials are non-iron based materials and therefore "non-iron based" materials are inherent in applicant's disclosure. Further, applicant's specification discloses specific examples and analysis of alloys of aluminum and 0.5 wt% copper (see for example, page 23, lines 5-6; Fig. 10; page 25, lines 11-15; table 1; and Figs. 2, 4, 5, 6, 7, 8 and 9). These disclosed alloys are non-iron-based alloys. Although the term "non-iron based" is not specifically stated in the specification, the recited term is supported by the specification since non-iron based alloys are inherent in the disclosed materials.

Accordingly, applicant respectfully requests withdrawal of the § 112, first paragraph, rejection of pending claims 37-42 and 44-59 in the Examiner's next action.

Claims 37-59 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dunlop, U.S. Patent No. 5,780,755. The Examiner is reminded by direction to MPEP §

2143 that a proper obviousness rejection has the following three requirements: 1) there must be some suggestion or motivation to modify or combine reference teachings; 2) there must be a reasonable expectation of success; and 3) the combined references must teach or suggest all of the claim limitations. Claims 37-42 and 44-59 are allowable over Dunlop for at least reason that Dunlop fails to disclose or suggest each and every limitation in any of those claims and fails to provide a reasonable expectation of success.

As amended, independent claim 37 recites a precipitate free alloy having a randomized microstructure and texture with a substantially uniform grain size. The amendment to claim 37 is supported by the specification at, for example, page 6, lines 18-30. Dunlop discloses precipitate regions of less than about 2 microns, preferably less than about 1 micron (col. 4, ll. 21-23; claims 4, 6 and 8 and col. 6, ll. 34-36). Dunlop does not disclose or suggest the claim 37 recited precipitate free alloy or provide a basis for a reasonable expectation of achieving the recited precipitate free alloy. Accordingly, independent claim 37 is not rendered obvious by Dunlop and is allowable over this reference.

Dependent claims 44-47 and 56-57 are allowable over Dunlop for at least the reason that they depend from allowable base claim 37.

Independent claim 38 recites a non-iron based alloy produced from a cast material where the alloy has at least one type of texture which is present that was not present in the cast material as originally cast. Dunlop discloses sputtering targets and methods of making sputtering targets utilizing liquid dynamic compaction, alone or in combination with equal channel angular extrusion (col. 4, ll. 24-51). Dunlop does not disclose or suggest the claim 38 recited alloy produced from a cast material, the alloy having at least one type of

texture present that was not present in the cast material as originally cast. Further, Dunlop does not provide a basis for achieving the at least one type of texture in the alloy which was not present in the cast material as originally cast. Accordingly, independent claim 38 is not rendered obvious by Dunlop and is allowable over this reference.

Dependent claims 48-55 and 58 are allowable over Dunlop for at least the reason that they depend from allowable base claim 38.

As amended, independent claim 39 recites an alloy comprising a fine grain size of less than about 1 micron and having uniformly distributed fine precipitates with an average diameter of less than 0.5 microns, the alloy being a non-iron based alloy with substantially random texture. The amendment to claim 39 incorporates the subject matter of claim 43. Claim 43 is appropriately cancelled. As discussed above, Dunlop discloses materials having precipitates on the order of 1 micron. Accordingly, Dunlop does not disclose or suggest the claim 39 recited alloy comprising uniformly distributed fine precipitates of an average diameter of less than 0.5 microns. Nor does Dunlop provide a basis for a reasonable expectation of achieving the recited average precipitate diameter of less than 0.5 microns. Accordingly, independent claim 39 is not rendered obvious by Dunlop and is allowable over this reference.

Dependent claims 40-42 and 59 are allowable over Dunlop for at least the reason that they depend from allowable base claim 39.

For the reasons discussed above, pending claims 37-42 and 44-59 are allowable. Accordingly, applicant respectfully requests formal allowance of such pending claims in the Examiner's next action.

Respectfully submitted,

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By: Jennifer J. Taylor
Jennifer J. Taylor, Ph.D.
Reg. No. 48,711